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=> s tocopherol
  21 FILES SEARCHED...
  28 FILES SEARCHED...
L1   43093 TOCOPHEROL

=> s l1 and separat?
  18 FILES SEARCHED...
L2   2438 L1 AND SEPARAT?

=> s l2 and esterify?
  37 FILES SEARCHED...
L3   6 L2 AND ESTERIFY?

=> d ibib ab 1-6

L3 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1999:495288 CAPLUS
DOCUMENT NUMBER: 131:131512
TITLE: Methods for **separating** a tocotrienol from a tocol-containing mixture and compositions thereof
INVENTOR(S): Sumner, Charles E., Jr.; Moncier, John D.; Kanel, Jeffrey S.; Foster, Mary K.
PATENT ASSIGNEE(S): Eastman Chemical Company, USA
SOURCE: PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9938860	A1	19990805	WO 1999-US1571	19990126
W: BR, CN, ID, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRIORITY APPLN. INFO.:			US 1998-PV72962	19980129
			US 1998-PV72963	19980129

AB The invention relates to method for **sepg.** tocotrienol from a first tocol admixt. by heating the first tocol admixt. composed of a tocotrienol, at least one **tocopherol**, a fatty acid, and an **esterifying** compd. to **esterify** the fatty acid to produce a second tocol admixt. composed of the tocotrienol, the **tocopherol**, the esterified fatty acid, and the unesterified fatty acid; distg. the second tocol admixt. with the esterified fatty acid to remove the unesterified fatty acid from the second tocol admixt. to produce a third tocol admixt. composed of the tocotrienol and the **tocopherol**, with substantially removed unesterified fatty acid; distg. the third tocol admixt. for a sufficient time and temp. to substantially remove the tocotrienol and **tocopherol** from the third tocol admixt. to

produce a fourth tocol admixt. composed of the removed tocotrienol, **tocopherol**, and a non-tocol component; and extg. the tocotrienol from the fourth tocol admixt. with an extn. solvent composed of a polar, org. solvent that is miscible with water to produce a two phase system composed of a first phase contg. the majority of the extn. solvent and the second phase, wherein the selectivity of the extn. solvent for tocotrienol with respect to the **tocopherol** is greater than unity, and removing the first phase from the second phase, with the proviso that the extn. solvent is not a neat alc. The invention further relates to compns. produced by the methods of the present invention.

L3 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1999:495287 CAPLUS
DOCUMENT NUMBER: 131:131511
TITLE: Methods for **separating** a tocol from a tocol-containing mixture
INVENTOR(S): Sumner, Charles E., Jr.; Moncier, John D.; Kanel, Jeffrey S.; Foster, Mary K.
PATENT ASSIGNEE(S): Eastman Chemical Company, USA
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9938859	A1	19990805	WO 1999-US1570	19990126

W: BR, CN, ID, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: US 1998-PV72962 19980129
US 1998-PV72963 19980129

AB The invention relates to a method for **sepg.** tocol from a tocol-contg. admixt. by heating the tocol-contg. admixt. composed of a tocol, a fatty acid, and an **esterifying** compd. to **esterify** the fatty acid to produce a second tocol admixt. composed of the tocol, the esterified fatty acid, and the unesterified fatty acid; distg. the tocol-contg. admixt. with the esterified fatty acid to remove the unesterified fatty acid from the tocol admixt. to produce a tocol admixt. composed of the tocol with substantially removed unesterified fatty acid; distg. the tocol admixt. for a sufficient time and temp. to substantially remove the tocol from the tocol admixt. to produce a tocol admixt. composed of the removed tocol and a non-tocol component; and

extg.
the tocol from the tocol admixt. with an extn. solvent composed of a polar, org. solvent that is miscible with water to produce a two phase system composed of a first phase contg. the majority of the extn. solvent and the second phase, wherein the selectivity of the extn. solvent for tocol with respect to the non-tocol component is greater than unity, and removing the first phase from the second phase, with the proviso that the extn. solvent is not a neat alc.

L3 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1990:503371 CAPLUS
DOCUMENT NUMBER: 113:103371
TITLE: Recovery of carotenoids, **tocopherols**, tocotrienols and sterols from esterified palm oil
INVENTOR(S): Goh, Swee Hock; Kam, Toh Seok; Choo, Yen May; Ong, Augustine Soon Hock
PATENT ASSIGNEE(S): Institut Penyelidikan Minyak Kelapa Sawit Malaysia, Malay.; University of Malaya
SOURCE: Brit. UK Pat. Appl., 21 pp.
CODEN: BAKXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2213989	A1	19891129	GB 1988-29427	19881215
GB 2213989	B2	19910904		
PRIORITY APPLN. INFO.:			GB 1987-29232	19871215

AB A method for the isolation of the minor nonglyceride components of palm oil or similar vegetable oil contg. free fatty acid and nonglyceride components similar to that of palm oil comprises: (a) **esterifying** the free fatty acid component of the oil with .gtoreq.1 monohydric alcs. to form an esterified oil with a very low free fatty acid content; (b) converting the glycerides into monoesters by transesterification using .gtoreq.1 monohydric alc.; (c) adsorbing the nonglyceride components onto a selective adsorbent to **sep.** them from the esters; and (d) desorbing the nonglyceride components from the adsorbent. The adsorbent is preferably activated alumina, activated C, or silica gel. By the method, carotenes, sterols, **tocopherols** and other nonglyceride components can be isolated. Crude palm oil Me ester was dissolved in MeOH and applied to a C18 reversed-phase column. The esters were eluted

with
MeOH, and then carotenoids were eluted with C6H14: MeOH (98:2 vol./vol.)
or CHCl3.

L3 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1988:114619 CAPLUS
DOCUMENT NUMBER: 108:114619
TITLE: Concentration of **tocopherols** from soybean sludge by supercritical fluid extraction
AUTHOR(S): Shishikura, Akihiro; Fujimoto, Kenshiro; Kaneda, Takashi; Arai, Kunio; Saito, Shozaburo
CORPORATE SOURCE: Fac. Agric., Tohoku Univ., Sendai, Japan
SOURCE: Yukagaku (1988), 37(1), 8-12
CODEN: YKGKAM; ISSN: 0513-398X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Sepn.** of **tocopherols** from soybean sludge (byproduct of soybean oil deodorization) by supercrit. carbon dioxide (SC-CO2) and nitrous oxide (SC-N2O) was carried out. This **sepn.** was not possible by supercrit. fluid (SCF) alone and consequently, it was necessary to **esterify** the sludge with EtOH. **Tocopherols** could be concd. by >64%. The **tocopherols** could be recovered by 90% in this fraction by SC-CO2 extn. in conjunction with a silica gel column and simple pretreatment. The silica gel column could be regenerated for the most part by extn. with an entrainer, such as EtOH.

L3 ANSWER 5 OF 6 CEABA COPYRIGHT 2000 DECHEMA
ACCESSION NUMBER: 1988:771818 CEABA
TITLE: Concentration of tocophenols from soybean sludge by
supercritical fluid extraction
Anreicherung von Tocopherolen aus Sojabohnenrueckstaenden durch superkritische Fluidextraktion
AUTHOR: Shishikura, A.; Fujimoto, K.; Kaneda, T.; Arai, K.;
Saito, S.
SOURCE: Yukagaku (1988) 37(1(392)), p.8-12
CODEN: YKGKAM ISSN: 0513-398X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB **Separation** of **tocopherols** from soybean sludge by supercritical carbon dioxide (SC-CO2) and nitrous oxide (SC-N2O) was carried out. This **separation** was not possible by supercritical fluid (SCF) alone and consequently, it was considered necessary to **esterify** the sludge with ethanol. Greater **separation** was possible using slugde esterified free fatty acid with ethanol. **Tocopherols** could be concentrated by more than 64 %. The **tocopherols** could be recovered by 90 % in this fraction by SC-CO2 extration in conjunction with a silicic acid column and simple pretreatment. This silicic acid column could be regenerated for the most
part by extraction with an entrainer, such as ethanol. (Author)

L3 ANSWER 6 OF 6 JICST-EPlus COPYRIGHT 2000 JST

ACCESSION NUMBER: 880172978 JICST-EPlus
TITLE: Concentration of **tocopherols** from soybean sludge by supercritical fluid extraction.
AUTHOR: SHISHIKURA A; FUJIMOTO K; ARAI K; SAITO S
KANEDA T
CORPORATE SOURCE: Tohoku Univ., Sendai-shi, JPN
Koriyama Women's Coll., Koriyama-shi, JPN
SOURCE: Yukagaku (Journal of the Japan Oil Chemists' Society), (1988) vol. 37, no. 1, pp. 8-12. Journal Code: G0238A (Fig. 7, Tbl. 2, Ref. 17)
CODEN: YKGKAM; ISSN: 0513-398X
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: English
STATUS: New
AB **Separation** of **tocopherols** from soybean sludge by supercritical carbon dioxide(SC-CO2) and nitrous oxide(SC-N2O) was carried out. This **separation** was not possible by supercritical fluid(SCF) alone and consequently, it was considered necessary to **esterify** the sludge with ethanol. Greater **separation** was possible using sludge esterified free fatty acid with ethanol. **Tocopherols** could be concentrated by more than 64%. The **tocopherols** could be recovered by 90% in this fraction by SC-CO2 extraction in conjunction with a silicic acid column and simple pretreatment. The silicic acid column could be regenerated for the most part by extraction with an entrainer, such as ethanol.(author abst.)

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FILE 'AGRICOLA, ALUMINIUM, ANABSTR, APILIT, BIOCOMMERCE, BIOTECHNO, CABA, CAOLD, CAPLUS, CBNB, CEABA, CEN, CERAB, CIN, COMPENDEX, CONFSCI, GENBANK, INSPEC, INSPHYS, INVESTEXT, IPA, JICST-EPLUS, KKF, KOSMET, METADEX, NAPRALERT, NIOSHTIC, NTIS, PAPERCHEM2, ...' ENTERED AT 15:11:42 ON 23 MAR 2000

L1 43093 S TOCOPHEROL
L2 2438 S L1 AND SEPARAT?
L3 6 S L2 AND ESTERIFY?

=> s l2 and extract?
18 FILES SEARCHED...
L4 734 L2 AND EXTRACT?

=> s l4 and distil?
27 FILES SEARCHED...
L5 36 L4 AND DISTIL?

=> s l5 and esterif?
L6 7 L5 AND ESTERIF?

=> d ibib ab 1-7

L6 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1999:495288 CAPLUS
DOCUMENT NUMBER: 131:131512
TITLE: Methods for **separating** a tocotrienol from a tocol-containing mixture and compositions thereof
INVENTOR(S): Sumner, Charles E., Jr.; Moncier, John D.; Kanel, Jeffrey S.; Foster, Mary K.
PATENT ASSIGNEE(S): Eastman Chemical Company, USA
SOURCE: PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9938860	A1	19990805	WO 1999-US1571	19990126

W: BR, CN, ID, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: US 1998-PV72962 19980129
US 1998-PV72963 19980129

AB The invention relates to method for **sepg.** tocotrienol from a first tocol admixt. by heating the first tocol admixt. composed of a tocotrienol, at least one **tocopherol**, a fatty acid, and an **esterifying** compd. to **esterify** the fatty acid to produce a second tocol admixt. composed of the tocotrienol, the **tocopherol**, the **esterified** fatty acid, and the unesterified fatty acid; **distg.** the second tocol admixt. with the **esterified** fatty acid to remove the unesterified fatty acid from the second tocol admixt. to produce a third tocol admixt. composed of the tocotrienol and the **tocopherol**, with substantially removed unesterified fatty acid; **distg.** the third tocol admixt. for a sufficient time and temp. to substantially remove the tocotrienol and **tocopherol** from the third tocol admixt. to produce a fourth tocol admixt. composed of the removed tocotrienol, **tocopherol**, and a non-tocol component; and **extg.** the tocotrienol from the fourth tocol admixt. with an **extn.** solvent composed of a polar, org. solvent that is miscible with water to produce a two phase system composed of a first phase contg. the majority of the **extn.** solvent and the second phase, wherein the selectivity of the **extn.** solvent for tocotrienol with respect to the **tocopherol** is greater than unity, and removing the first phase from the second phase, with the proviso that the **extn.** solvent is not a neat alc. The invention further relates to compns. produced by the methods of the present invention.

L6 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1999:495287 CAPLUS

DOCUMENT NUMBER: 131:131511
TITLE: Methods for **separating** a tocol from a tocol-containing mixture
INVENTOR(S): Sumner, Charles E., Jr.; Moncier, John D.; Kanel, Jeffrey S.; Foster, Mary K.
PATENT ASSIGNEE(S): Eastman Chemical Company, USA
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9938859	A1	19990805	WO 1999-US1570	19990126

W: BR, CN, ID, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: US 1998-PV72962 19980129
US 1998-PV72963 19980129

AB The invention relates to a method for **sepg**. tocol from a tocol-contg. admixt. by heating the tocol-contg. admixt. composed of a tocol, a fatty acid, and an **esterifying** compd. to **esterify** the fatty acid to produce a second tocol admixt. composed of the tocol, the **esterified** fatty acid, and the unesterified fatty acid; **distg**. the tocol-contg. admixt. with the **esterified** fatty acid to remove the unesterified fatty acid from the tocol admixt. to produce a tocol admixt. composed of the tocol with substantially removed unesterified fatty acid; **distg**. the tocol admixt. for a sufficient time and temp. to substantially remove the tocol from the tocol admixt. to produce a tocol admixt. composed of the removed tocol and a non-tocol component; and **extg**. the tocol from the tocol admixt. with an **extn**. solvent composed of a polar, org. solvent that is miscible with water to produce a two phase system composed of a first phase contg. the majority of the **extn**. solvent and the second phase, wherein the selectivity of the **extn**. solvent for tocol with respect to the non-tocol component is greater than unity, and removing the first phase from the second phase, with the proviso that the **extn**. solvent is not a neat alc.

L6 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1997:533639 CAPLUS
DOCUMENT NUMBER: 127:190871
TITLE: Method of producing (.+-.)-**tocopherol** or (.+-.)-tocopheryl acetate
INVENTOR(S): Jaedicke, Hagen; Grafen, Paul; Laas, Harald
PATENT ASSIGNEE(S): Basf A.-G., Germany; Jaedicke, Hagen; Grafen, Paul;

Laas, Harald
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9728151	A1	19970807	WO 1997-EP324	19970124
W: CN, JP, RU, SK, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19603142	A1	19970731	DE 1996-19603142	19960129
DE 19617444	A1	19971106	DE 1996-19617444	19960502
EP 882036	A1	19981209	EP 1997-901601	19970124
R: CH, DE, FR, GB, LI				
PRIORITY APPLN. INFO.:			DE 1996-19603142	19960129
			DE 1996-19617444	19960502
			WO 1997-EP324	19970124

OTHER SOURCE(S): CASREACT 127:190871

AB A method is disclosed of producing (.+-.)-.alpha.-**tocopherol** or (.+-.)-.alpha.-tocopheryl acetate by acid catalyzed reaction of 2,3,5-trimethylhydroquinone (TMH) with phytol or isophytol (IP) in a solvent at raised temp. and, where appropriate, subsequent **esterification** of the **tocopherol** thus obtained with acetic anhydride. The method is characterized in that the reaction is carried out in an optionally substituted cyclic five-ring carbonate such as 1,2-propylene carbonate, or in an optionally substituted five-ring lactone such as .gamma.-butyrolactone, as the solvent at temps. of between 50 and 200.degree.. The reaction works particularly well if, following the reaction of TMH and phytol or IP, the **tocopherol** which **separates** out as an upper phase as the reaction mixt. cools and/or the reaction mixt. is **extd.** using a suitable aliph. hydrocarbon, the **tocopherol** is isolated by **distn.** from the **ext.**, and the **sepd.** cyclic carbonate or .gamma.-lactone which can contain excess TMH and acidic catalyst is reused as solvent. In many cases, it has been shown to be advantageous to carry out the reaction of TMH with phytol or IP with removal of the water as azeotrope, using a suitable hydrocarbon and/or in the presence of a mixt. of ortho-boric acid with oxalic acid, tartaric acid or citric acid, or alternatively in the presence of BF3 etherate as the acidic catalyst. Surprisingly, the five-ring carbonates and five-ring lactones prove to have sufficient stability under the reaction conditions and suitable solvent characteristics to permit the process to be carried out continuously.

ACCESSION NUMBER: 1991:5295 CAPLUS
DOCUMENT NUMBER: 114:5295
TITLE: Technology for **separating** vitamin E from the residues of vegetable oil refining
INVENTOR(S): Qu, Delin; Chen, Peirong; Su, Jianmin
PATENT ASSIGNEE(S): Tsinghua University, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 11 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1034367	A	19890802	CN 1987-106187	19870917
CN 1013197	B	19910717		

AB The title named involves: (1) **esterification** of plant (e.g. soybean) residue with EtOH in MeOH at 60-80.degree. for 4 h, (2) washing the reaction product with 60-70.degree. water until the water is neutral, (4) vacuum-**distn.** of the resultant product to give vitamin E, (4) repeating steps of (1) to (3), (5) **extg.** the crude **distillate** with MeOH or MeOH-acetone, (6) allowing to stand to ppt. and removing the ppt., (7) chromatog. of the supernatant on silica gel, and (8) chromatog. on strongly basic cation exchangers (not specified).

L6 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1974:567970 CAPLUS
DOCUMENT NUMBER: 81:167970
TITLE: Utilization of deodorized condensates from vegetable oils
AUTHOR(S): Kim, Jum Sik
CORPORATE SOURCE: Coll. Eng., Hanyang Univ., Seoul, S. Korea
SOURCE: Taehan Hwahak Hoechi (1974), 18(4), 297-301
CODEN: DHWHAB
DOCUMENT TYPE: Journal
LANGUAGE: Korean
AB The condensates were heated to **sep.** the oil from the water, and the oil was removed. After Me **esterification**, the oil was **distd.** to remove fatty acids. The oil was then saponified and the unsaponifiable matter was **extd.** with hot MeOH and concd. The sterols were crystd. from the concd. soln. The mother liquor was dissolved in MeOH and cooled to -20.degree. toremove residual fatty acids. **Tocopherols** were then **sepd.** with an ion exchange resin.

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ACCESSION NUMBER: 1971:491267 CAPLUS
DOCUMENT NUMBER: 75:91267
TITLE: Process report on vitamins. IV
AUTHOR(S): Ganju, Avtar

CORPORATE SOURCE: India
SOURCE: Indian Chem. J. (1971), 5(10), 40-3
CODEN: ICLJAG
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Five techniques for isolation of **tocopherols** from animal and vegetable fat deodorizer sludge are reviewed: (1) **esterification** of the 20% sterols, 8 **tocopherols**, 20% fatty acid-triglyceride mixt., **sepn.** of the resulting esters by **distn.**, and alc. wash of the residue to remove the sterols; (2) sapon. of the mixt., **sepn.** of unsaponifiable matter (**tocopherols** and sterols), and wash **sepn.**; (3) **sepn.** of **tocopherols** by chloromethylation and redn.; (4) fractional liq.-liq. **extn.**; (5) ion exchange.

L6 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1967:412811 CAPLUS
DOCUMENT NUMBER: 67:12811
TITLE: Utilization of [vegetable oil] concentrate containing **tocopherols**. I. **Separation** of concentrate components by thin-layer chromatography and some properties of reducing substances
AUTHOR(S): Takeuchi, Takahiro; Tatsukawa, Toyokazu
CORPORATE SOURCE: Ind. Res. Inst., Kobe, Japan
SOURCE: Yukagaku (1967), 16(4), 185-93
CODEN: YKGKAM
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB It is generally accepted that the deodorized condensates obtained in the refining of vegetable oils contain 1-10% **tocopherols**. The condensates are good raw materials for prepn. of .alpha.-**tocopherol** or **tocopherol** concentrates. The concentrate containing 42.6% .alpha.-type **tocopherols** was prepd. by **esterification** and **distn.** of the soybean oil condensate. Thin-layer chromatog. was used to analyze the concentrate components prior to studies on utilization of the concentrate. For analysis of these components, nonpolar and polar developing solvent systems were at least necessary. Hydrocarbons, squalene, and 5 other unknown components were **sepd.** from each other in nonpolar solvent systems, such as naphtha. On the contrary, .alpha., .gamma., and .delta.-**tocopherol**, higher alcs., and sterols were **sepd.**, each giving **sep.** spots in polar solvent systems, such as C6H14-Et2O (7:3 by vol.). These spots could be detected by uv illumination and spraying with solns. such as iodine-C6H6, 50% H2SO4, or Emmerie-Engel reagent. 20 references.

=> log y
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION

FULL ESTIMATED COST	88.90	89.11

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-6.12	-6.12

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